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ABSTRACT

The development of a program and curriculum for instruction in technical English for Saudi Arabian petrochemical plant operator trainees studying in the United States for two years was undertaken by the University of South Alabama's English Language Center. The program was designed to accommodate (1) the degree of skills and prior learning of the trainees, (2) skills and knowledge to be learned, (3) expected outcomes, and (4) cultural information needs. Very little information about the trainees' experience or education was available, and only required vocabulary lists and training manuals were made available for developing the curriculum. An integrative skills approach was adopted, and the curriculum was planned to include structure, reading, listening/speaking, writing, technical vocabulary, general vocabulary, and English handwriting. Other program elements provided at the request of the contractor were cultural activities and a program design that prepared the trainees to assume professional roles on their return to Saudi Arabia. (MSE)

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ENGLISH FOR PETROCHEMICAL PLANT OPERATORS

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June 6, 1985

English for Petrochemical Plant Operators

The negotiations had taken a little over two months, but at last the contract was signed and countersigned. The contract specified that we were to prepare forty Saudi Arabian nationals for the additional training they would receive in Petrochemical Plant Operation. Our task, then, would be to develop in the trainees a degree of fluency in English, a fluency which would allow them to learn the scientific and technological terminology and practices of the industry as well as the day to day language of interaction among supervisor and workers.

Every curriculum designer must, at the outset, take into account three variables: 1) input, the degree of skill and or prior learning of the students; 2) skills or body of knowledge to be learned, and 3) expected outcomes or levels of appropriate achievement. When the student population is different culturally, a fourth variable, cultural orientation, must be included in the process. A description of the design process which resulted in the English for Petrochemical Plant Operators Program follows.

A most valuable tool in curriculum design is the needs assessment; yet given the limited time we were alloted, such an assessment had to be abbreviated to the extent that we cannot truthfully report that an assesssment was made. We were given only bits and pieces of information, much of which later proved false or at best overstated. For example, we were told that the trainees would be high school graduates approximately 17 to 35 years of age. Each of the trainees had been tested prior to acceptance in the program and had received an acceptable score. The test administered was not named nor was a synopsis or its contents, validity, or reliability presented.

As a result of the information received, we expected a group of forty young men who were literate and who had been selected on the basis of a test. Our questions concerning previous study of English as a Second Language yielded a qualified yes. We asked if the trainees could write in English script and received the same evasive answer. Finally we wanted to know about previous work experience and were told that those records along with health records were unavailable.

Our next task was to discover the skill level which was needed for the subsequent study. Given the unknown level of achievement in English of the trainees we determined that a relatively standard four levels of study must be designed. The four levels would range from beginning, which presupposed no knowledge of English, through an advanced level which would be preparatory to the subsequent technological study. Each level would have a term of three months dividing the contracted year of study.

Our attempt to visit the subsequent training site was frustrated. In place of a visit which would allow us to assess the degree of linguistic sophistication required, we were given vocabulary lists and training manuals. Armed with these we designed technical vocabulary syllabi on the four previously described levels of study. We found that these syllabi must include name of hand tools, various gauges, processes, and operation terms. One piece of information we did manage to get was that both British and American terminology must be included. General vocabulary was to be taught in a separate class.

It was determined that an integrative skills concept would be used. Although the four skills of reading, writing, listening, and speaking would be practiced separately, some mechanism for integration must be devised. This, we reasoned, could be done in the vocabulary study facet of the curriculum. Grammar was to be taught using a straight forward drill practice approach and a standard text chosen by the contractor; composition would take the form of sentence to paragraph to report writing reflecting the future writing needs of the trainees.

Instruction in handwriting was included for those who might not be proficient. Listening and speaking, too, would focus on description and comprehension of directions and commands. Also included was conversational English which might be encountered in a factory or other industrial workplace. We included less precise speech which featured reductions and argot common to workers. Finally, we determined that even coarse language should be presented.

This final curriculum included: structure, reading, listening/speaking, writing, technical vocabulary, and general vocabulary. Trainees would attend class six hours per day five days per week.

The evaluation of trainee progress was based on performance in the various classes. Promotion from one level to the next was determined by the achievement

of an average score of 80 at the direction of the contractor. Unsuccessful trainees would repreat the given level until the 80 mark was achieved. Although we would administer our own test, we were told that from time to time contractor supervisors would administer their own tests to the trainees. Although we were given a general idea of the contents of the tests,we were not allowed to preview them. Our task, then, was to prepare the students as best we could knowing that a trainee might be whisked away at anytime and placed in subsequent training. As we later learned, these students were taken based on training slot vacancies and not necessarily an adequate preparation. Thus the so called "cut off" scores for "promotion" were flexible -- lower if more slots were open and more competitive if slots were few.

The fourth variable proved to be the greatest challenge. Not only were the trainees from a country only recently modernized but at least half were from non-industrialized areas of the Kingdom.

We had been informed that the trainees would spend at least two years in the United States: therefore, it was necessary to include cultural orientation. Further our research indicated that, given the short period of time we had and the future careers of the trainees, great attention should be paid to their preferred or customary learning style.

Culturally rich visits were planned. These included visits to area sites and to tourist attractions. Other trips focused on industrial complexes, trade shows, and sporting events. Dinners and western style parties completed the activities.

Guest speakers were scheduled on such topics as banking, health concerns, driver's training, and law enforcement. Films and pamphlets were presented. Trainees were encouraged to discuss cultural/social matter in class.

Further, our task included preparing trainees to assume the role of employee once they returned to Saudi Arabia. Such Western notions of punctuality and quality control were stressed. Absences were treated in the same manner as they would be treated on the job. Safety regulations were stressed.

In summary, our task was to prepare the forty trainees to live and work in the United States even though they would return to Saudi Arabia and assume their positions. Most of our curricular design had to be done intuitively since we had little advance information.

Regardless of the limitations under which we worked the project was very successful. As our trainees went on to technical training, we received reports that our preparation had not only been adequate but even excellent. Our trainees completed the technology phase with little difficulty. There were, however, notable failures. Of the forty original trainees, six failed to achieve the degree of fluency required. In our own defense, it must be added that these six were non-readers of Arabic and had not completed even the sixth grade as we had been led to believe. These trainees simply had too far to go. They did learn to read at a proficiency level which might be equated to a third grade level for an American. We count that achievement as excellent.

This experience has been valuable to us. We discovered that our knowledge of the techniques of teaching English as a Second Language, our familiarity with the English language, its various registers and applications, and our ability to deal effectively with a wide variety of cultural aspects has served us and our students well.

Our philosophy has been and remains: We teach English language learners not merely English language. And for whatever reason an individual or corporation seeks to increase facility or fluency, one factor remains constant. Regardless of our preconceived or studied beliefs about how language should be presented, our responsibility remains with the individual learner, his aspirations, his motiviation, and the ultimate end to which his study with us will lead.